

# Unmanned Aerial Vehicle (UAV) System Fact Sheet

## EXDRONE Low Cost Expendable Reconnaissance UAV

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### System Description:

The EXDRONE is a delta platform flying wing. Its power plant is the Quadra 100SS engine. The flight control system consists of an up-link receiver connected to a GP-based auto pilot. The air vehicle is gyro stabilized and capable of preprogrammed autonomous flight. The EXDRONE has a launch weight of 89 pounds and a 20 pound payload capacity. It is launched by pneumatic rail and recovered by parachute or skid landing. The air vehicle has a service ceiling of 10,000 ft with a mission altitude of 3,000-6,000 ft mean sea level. It has a top speed of 100 miles per hour, a mission endurance of 2.5 hours, and an operational range of 50+ kilometers (line-of-sight). An EXDRONE system consists of 10 air vehicles, 2 ground control stations and ground support equipment including a pneumatic launcher.

### System Capabilities:

Wingspan:	8.25 ft
Length:	5.33 ft
Weight:	89 lbs
Payload Capacity:	20 lbs
Range (data link):	50 km (line-of-sight)
Endurance:	2.5 hrs
Cruise Speed:	100 mph
Mission Altitude (MSL):	3,000 - 6,000 ft
Propulsion:	Quadra 100 SS gasoline or Heavy Fuel Engine
Navigation:	GPS/Autonav
Payloads:	Down-looking zoom color camera, EW jammer, Pan/Tilt/Zoom camera, Tactical Remote Sensor System

### Program Summary:

The EXDRONE program, which began in the early 1980's, has followed a strategy to integrate Commercial Off-The-Shelf (COTS) and Government Off-The-Shelf (GOTS) components and payloads. Additionally, the documentation and procurement package is government owned. During the fall and winter of 1995, the EXDRONE system was integrated on a small deck R&D naval platform. Both the Marine Corps and the Army have operated the EXDRONE. An upgraded system is currently being used by the Marine Corps in advanced warfighting experiments. The upgrade features a 32-bit unified autopilot, a new ground control station with artificial horizon display, and a ruggedized Pan/Tilt/Zoom color camera payload. The upgraded EXDRONE system is used by PMA 263 to demonstrate UAV capabilities to a wide variety of potential customers, and as a low-cost small payload experimental platform. One system was sent to the country of Bahrain in 1999. In recognition of its vital role to the United States, the EXDRONE was inducted into the Patuxent River Naval Air Museum on December 20, 2000.